

ABSTRACT OF THE DISCLOSURE

Compositions and methods are disclosed for preventing the oxidative corrosion of metal surfaces by exposing a metal surface to an anti-corrosion agent characterized as 2,4-trans, trans-hexadienoic acid (2,4-HDA), its alkali salt identified as potassium sorbate (KHDA), or other derivatives that conserve or embody the 2,4-trans, trans-hexadiene-type moiety present in their molecular structures as an active anti-corrosion agent (ACA), in combination with a material capable of forming a moisture retentive barrier over the metal surface.

The compositions and methods of the invention provide a practical, non-toxic way of ensuring anti-corrosion protection for metals, or devices containing exposed metals, stored or operated in water or in the presence of water vapor. Exemplary, non-exhaustive uses of the invention include employing the composition as a lubricant for the surface of a metal or as a pump oil or brake fluid; using the composition as an undercoating for painting, electro-plating or electro-polishing procedures; and providing a protective coating for any metal or metal-containing machine or device, from automotive assembly plant metal press machines to electronic circuit boards.

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